

Catalog No. 1809732-01  
Issued: September 1986

# **VPR-2/2B/80**

## **VIDEO PRODUCTION RECORDER**

SCANNER SLIP RING/BRUSH KIT  
[BRUSH MOTOR]  
INSTALLATION

# **INSTRUCTIONS**

**AMPEX**

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**1986 by Ampex Corporation  
Catalog No. 1809732-01  
Issued: September 1986**

## **INSTALLATION INSTRUCTIONS**

### **VPR-2/VPR-2B/VPR-80**

#### **SCANNER SLIP RING/BRUSH KIT (BRUSH TYPE MOTOR)**

#### **1 INTRODUCTION**

These instructions are part of the *Scanner Slip Ring/Brush Kit (Brush Type Motor)*, Ampex Part No. 1386528, and provide information on removing the scanner slip ring and brush assembly and replacing it with a self-aligning encapsulated unit. These instructions apply to all VPR-2, VPR-2B, and VPR-80 scanners using brush type motors and having the following part numbers: 1401100, 1401099, 1461430.

List of Materials No. 1386528-01 is included, along with the following engineering drawings:

- 1401177 VPR-2/2B Scanner Wiring Diagram
- 1461174 VPR-80 Scanner Wiring Diagram
- 1472836 Brush Type Motor Interconnect Assembly
- 1472801 Slip Ring Capsule

#### **2 PRELIMINARY PROCEDURE**

Remove and replace the machine scanner according to procedures explained in the appropriate manual:

- for VPR-80, the service manual
- for VPR-2 and VPR-2B, the theory and maintenance manual

No special tools are required to install the new assembly.

#### **CAUTION**

**EXERCISE CARE WHEN HANDLING SLIP RING ASSEMBLY; ASSEMBLY CONTAINS DELICATE BEARINGS THAT CAN BE DAMAGED BY ROUGH HANDLING.**

#### **Note**

**It is recommended that you remove all video heads and store them in a safe place before proceeding.**

#### **3 REMOVING OLD ASSEMBLIES**

#### **CAUTION**

**BECAUSE OF STATIC-SENSITIVE DEVICES ON PWAs IN ALL UNITS OBSERVE APPROPRIATE STATIC CONTROL PROCEDURES.**

## VPR-2/2B/80

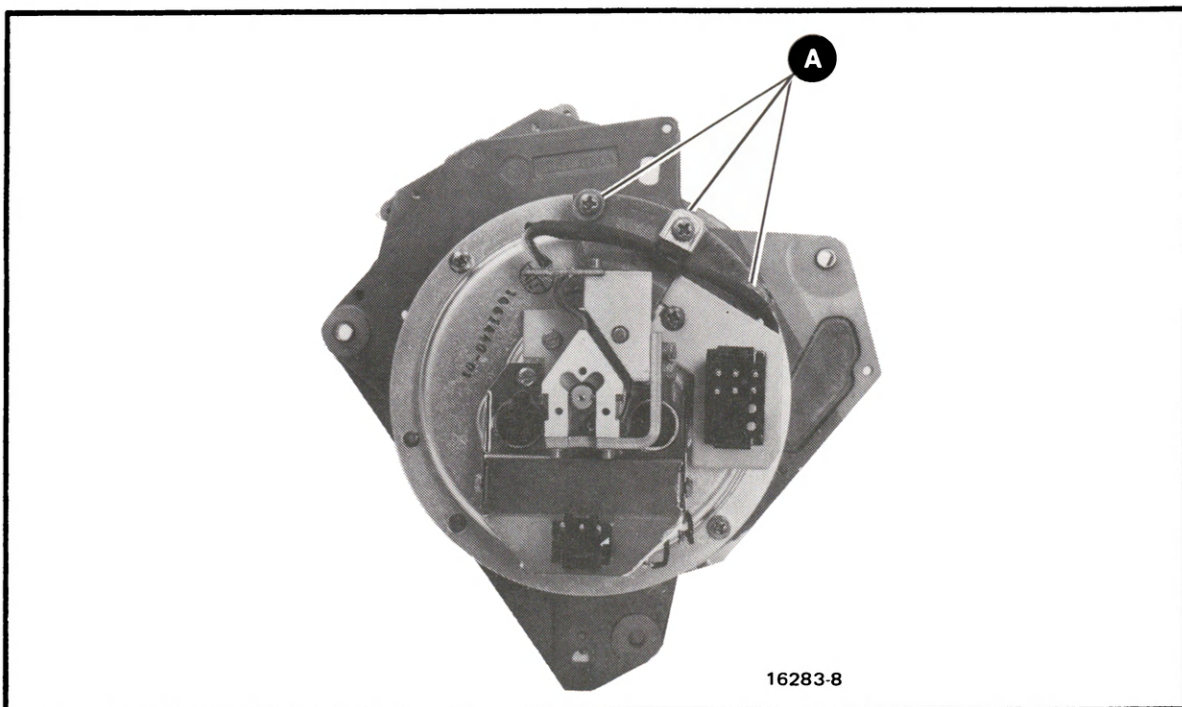
After removing scanner from machine, proceed as follows:

- STEP 1** Remove the two motor cover securing screws and place scanner on a leg set assembly (P/N 1401302), available as part of the Format Maintenance Tool Kit or the older Service Tool Kit.

### CAUTION

**USE EXTREME CARE WHEN DESOLDERING IN THE SCANNER UPPER DRUM AREA. DO NOT ALLOW SOLDER TO DROP ON OR REMAIN ON ANY PART OF THE ASSEMBLY.**

- STEP 2** Remove the upper scanner assembly cover, and perform the following:
- Make a list of the wire colors attached to terminal lugs E1 through E6, and save this information for a later step.
  - Remove by desoldering (do not cut) the wires that are attached to terminal lugs E1 through E6 of the Video Preamp PWA (P/N 1400215).
- STEP 3** With the rear of the scanner facing upward, remove motor cover to expose the slip ring and brush assembly.
- STEP 4** Remove three screws that secure the brush support bracket to the motor. Slide brush housing assembly off the slip ring and lift it free of the scanner. See Figure 1, A.
- STEP 5** Remove and save the three screws that secure the slip ring assembly to the motor collar adapter. While guiding the loose wire ends through the shaft hole, carefully remove the slip ring assembly from the scanner.



**Figure 1. Removing Brush Housing Assembly**

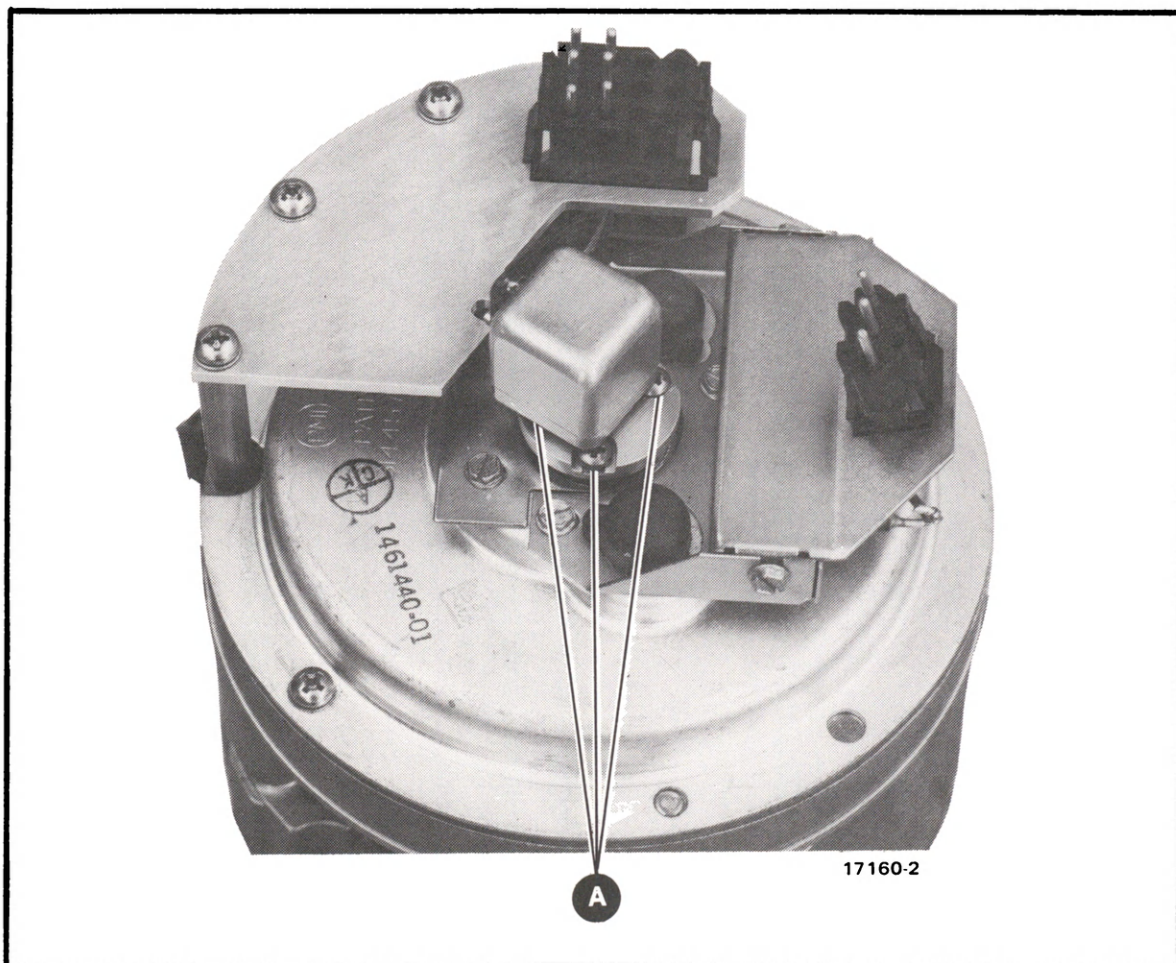
#### **4 INSTALLING NEW ASSEMBLIES**

To install new assemblies and components supplied with this kit, proceed as follows:

##### **CAUTION**

**EXERCISE CARE WHEN HANDLING SLIP RING ASSEMBLY;  
ASSEMBLY CONTAINS DELICATE BEARINGS THAT CAN BE  
DAMAGED BY ROUGH HANDLING.**

- STEP 1** Using the slip ring removed in paragraph 3, step 5, as a reference, compare the new slip ring capsule (P/N 1472801-01) with the old by matching color and wire lengths. Trim leads of the new assembly to match lead lengths of the old assembly. Lead length must be duplicated to ensure scanner balance.
- STEP 2** Install the slip ring capsule (P/N 1472801) by feeding wires through the shaft and securing the assembly to the motor collar using screws saved in paragraph 3, step 5. See Figure 2, A.

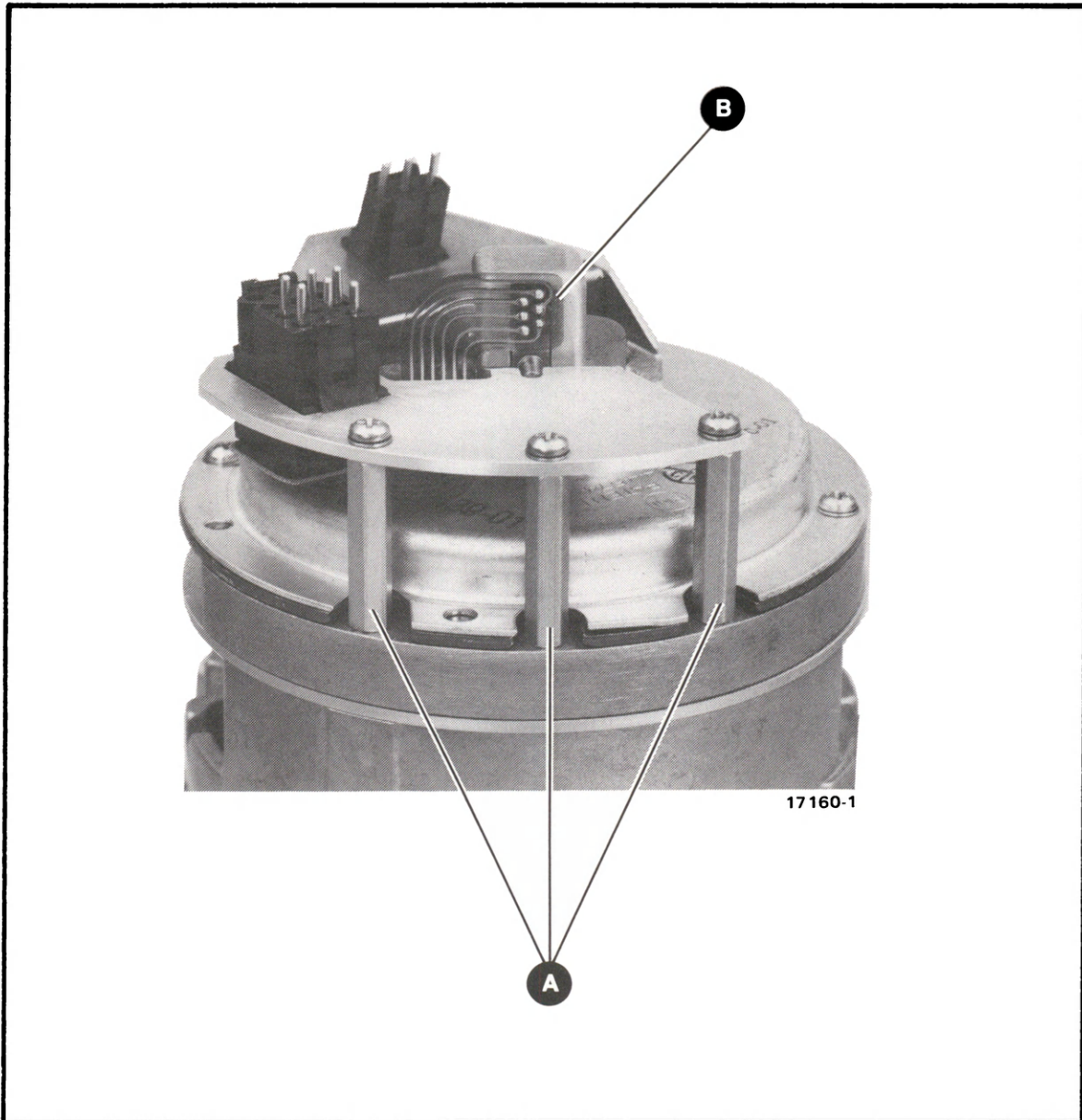


**Figure 2. Installing Slip Ring Capsule**



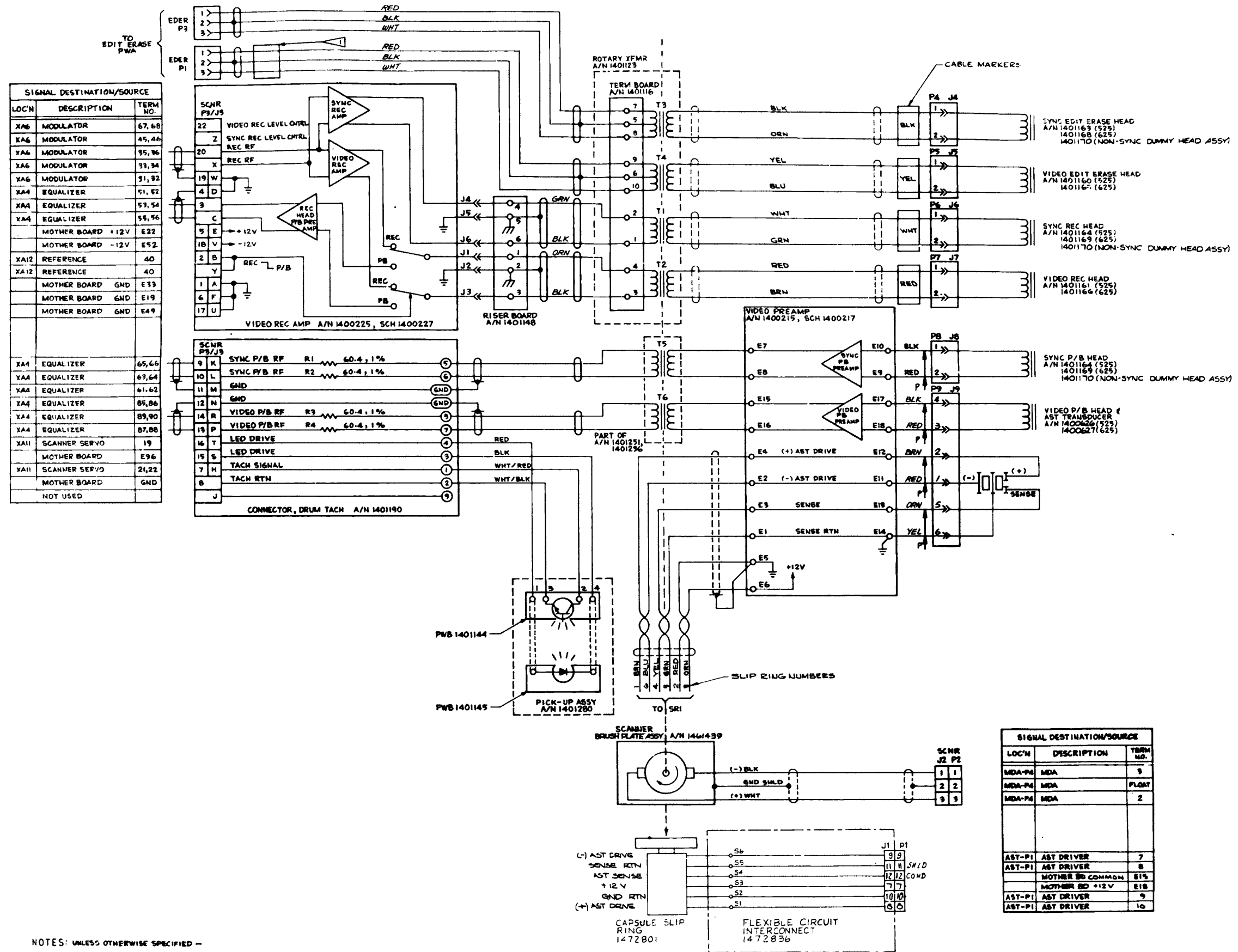
## VPR-2/2B/80

- STEP 3** Install the three hex standoffs (P/N 283-645) in the holes vacated by removal of the brush housing assembly. See Figure 3, A.
- STEP 4** Install the flexcircuit connector (P/N 1472836) into the rectangular hole on the derotation bracket (P/N 1472939) so that the flexcircuit is on the slot side of the derotation bracket. See Figure 3.
- STEP 5** Attach the derotation bracket to the hex standoffs using the panhead screw assembly (P/N 475-081). Make sure the derotation pin on the slip ring capsule is positioned in the bracket slot.



**Figure 3. Scanner Assembly with Standoffs and Flexcircuit Installed**

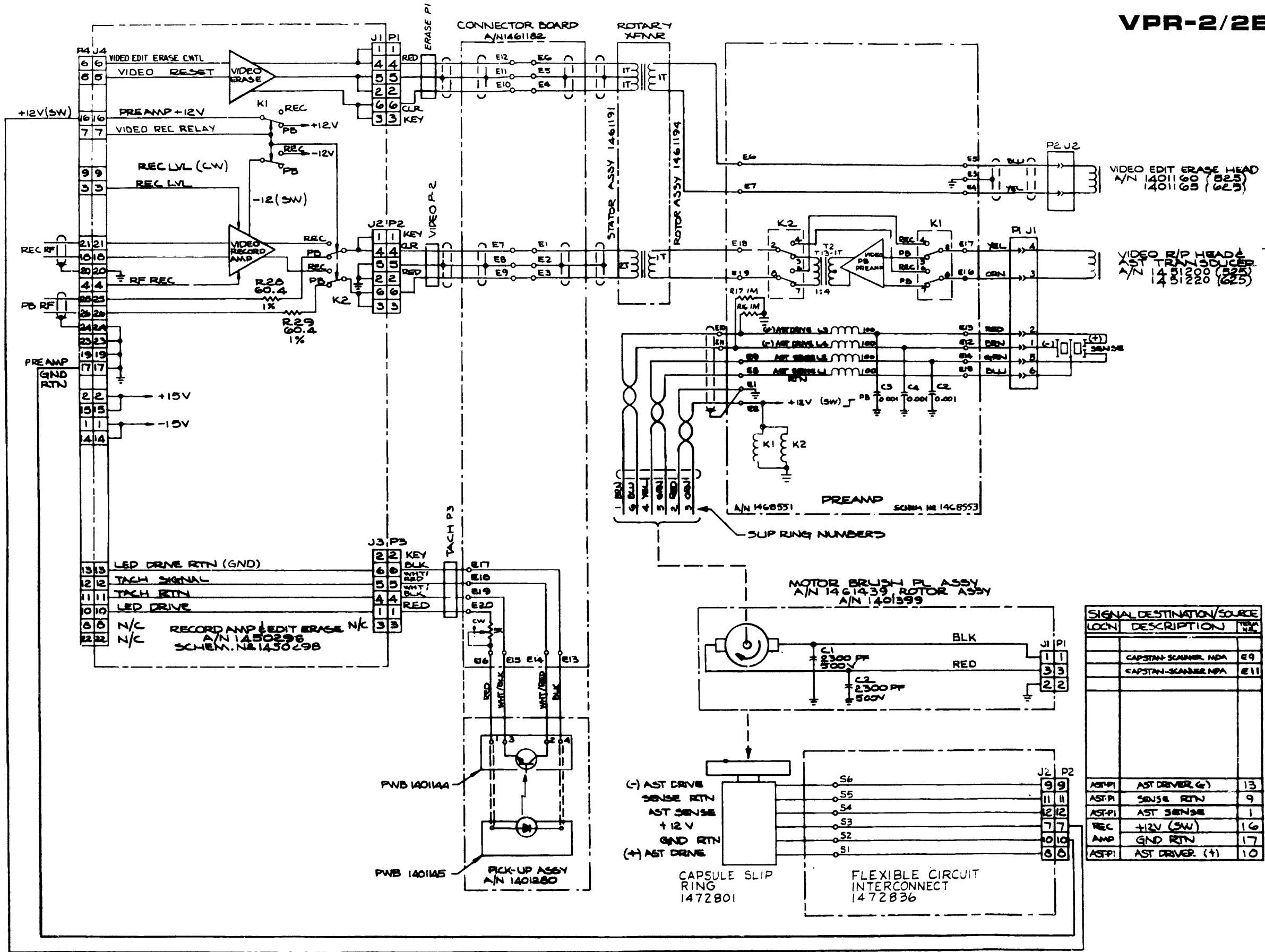




Wiring Diagram No. 1401177J.  
Scanner, VPR-2/2B

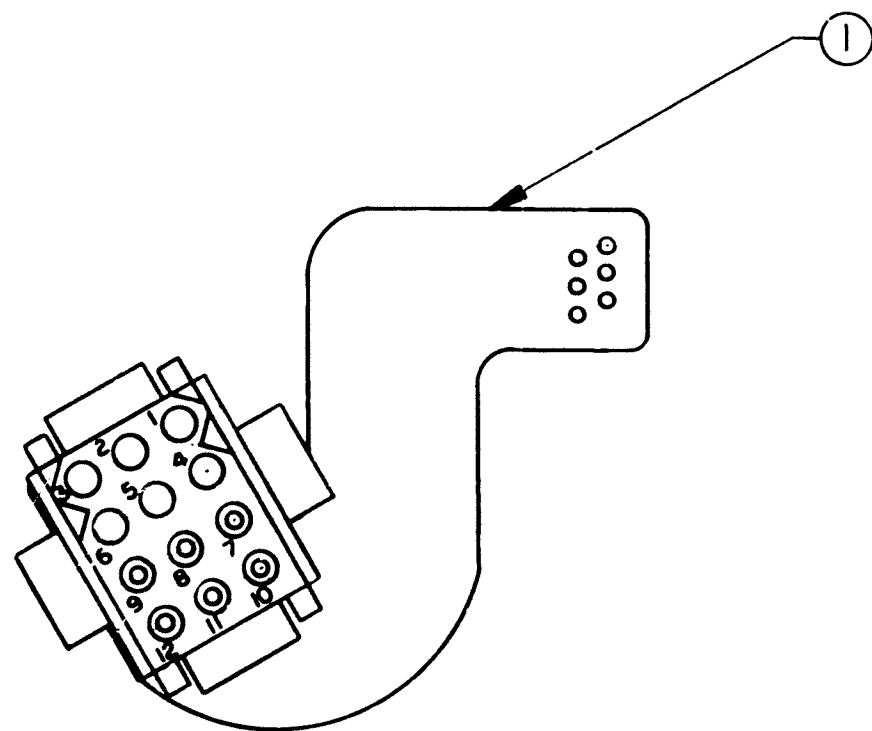


SIGNAL DESTINATION / SOURCE		
LOCN	DESCRIPTION	TERM
XA6	CONTROL PWA	15
XA6	CONTROL PWA	16
	PREAMP	E2
	CONTROL PNL	CW
	CONTROL PNL	MPER
XA1	MOD-DEM0D	37,38
XA1	MOD-DEM0D	39,40
XA1	MOD-DEM0D (GND)	41,42
XA6	CONTROL PWA	18
XA1	MOD-DEM0D	47,48
XA1	MOD-DEM0D	49,50
XA1	MOD-DEM0D (GND)	45,46
	MOTHERBOARD	E66
	MOTHERBOARD	E67
	PREAMP	E1
	MOTHERBOARD	E41
	MOTHERBOARD	E40
	MOTHERBOARD	E53
	MOTHERBOARD	E52
	MOTHERBOARD	E9
XA5	SERVO PWA	91
	MOTHERBOARD	E80
XA5	SERVO PWA	92



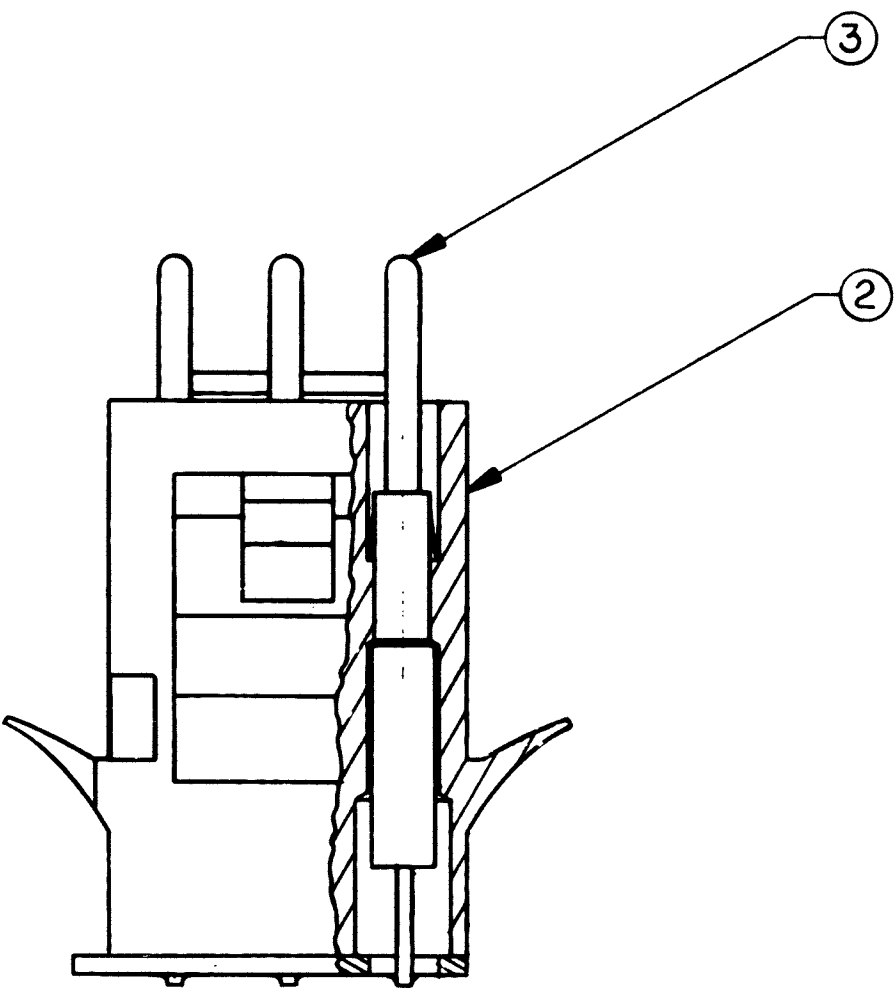
SIGNAL DESTINATION / SOURCE		
LOCN	DESCRIPTION	TERM
	CAPSTAN-SCANNER MDA	E9
	CAPSTAN-SCANNER MDA	E11
AST-P1	AST DRIVER (G)	13
AST-P1	SENSE RTN	9
AST-P1	AST SENSE	1
REC	+12V (SW)	16
AMP	GND RTN	17
AST-P1	AST DRIVER (+)	10

Wiring Diagram No. 1461174E.  
Scanner, VPR-80



SCALE 2:1

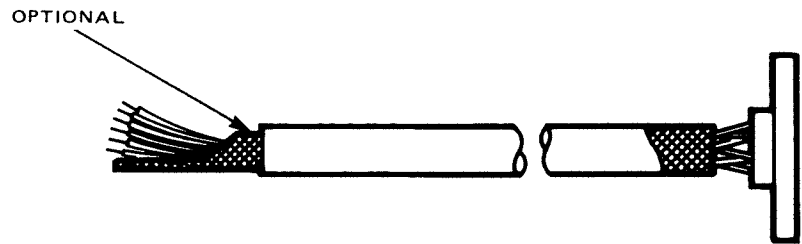
- NOTES:
- 1. PART NO. IS 1472836-01.
  - 2. MARK PART NO. PER BDI-1.



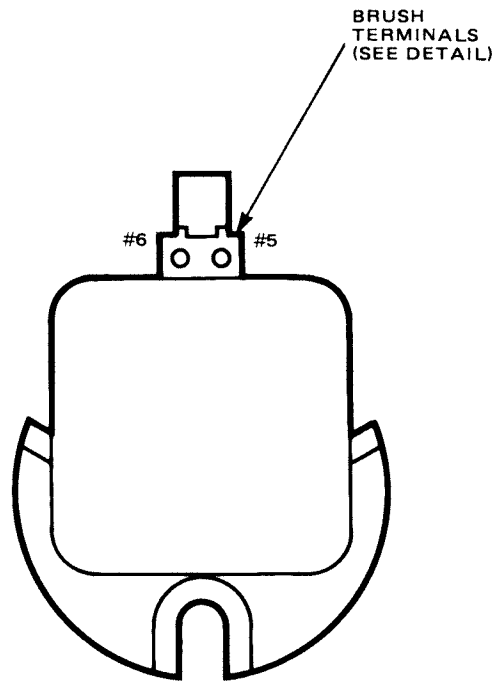
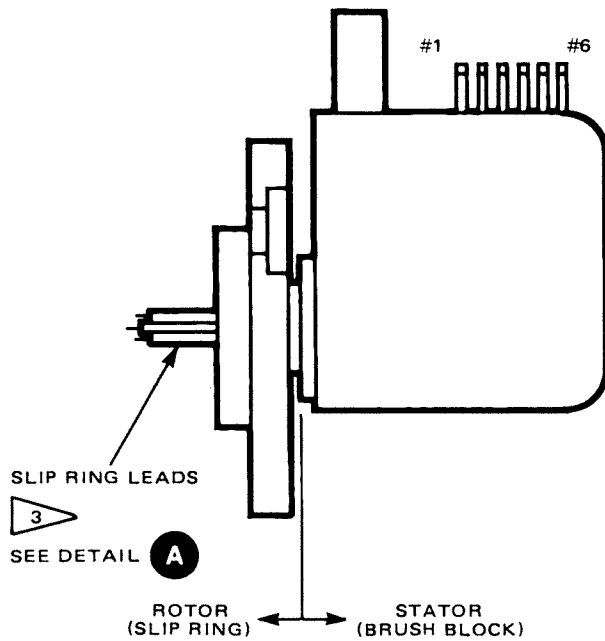
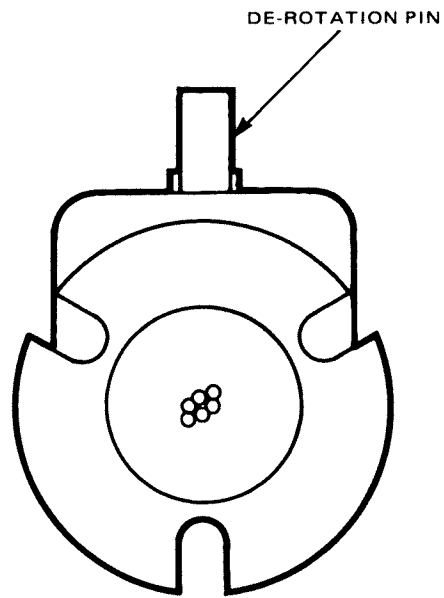
SCALE 4:1

6	3	166-786	CONTACT,PIN ,025 SQ POST
1	2	167-025	CONNECTOR HOUSING (12 POS.)
1	1	1472937-01	BRUSHTYPE MOTOR FLEXCIRCUIT

Assembly No. 1472836-01C.  
Brush Type Motor Interconnect



DETAIL A  
SCALE 1:1



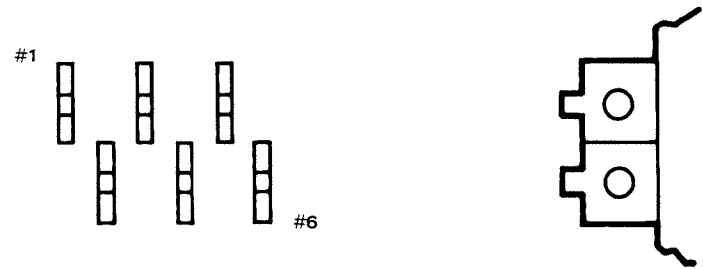
NOTES:

1. PART NO. 15 1472801-01.

3 SLIP RING LEAD COLOR CODE:

1. BLUE	4. ORANGE	{ MAKE 3 TWISTED PAIR, 2 TURN/IN MIN. (1-BLUE, 6-BROWN), (2-GREEN, 3-YELLOW), (4-ORANGE, 5-RED).
2. GREEN	5. RED	
3. YELLOW	6. BROWN	

4. DE-ROTATION PIN SHALL BE ENGAGED WITH A LOOSE FIT.



BRUSH TERMINAL DETAIL  
(SCALE 8:1)

Drawing No. 1472801.  
Slip Ring Capsule

VPR-2/2B/80  
SCANNER SLIPRING/BRUSH KIT  
[ BRUSH MOTOR ]  
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APRIL 18, 1988

AMPEX INSTRUCTIONS 1809732-01  
ADDENDUM SHEET

This kit includes the recent manufacturing change incorporating a conformal coating on the slipring for better contaminant protection and performance. In order to include this coating, the slipring ( P/N 1472801 ) and interconnect assembly ( P/N 1472836 ) will be presoldered.

As a result, all instructions referring to preparation and soldering of these components are not necessary. This would include STEP 6 in the instructions.